

Pb Free Plating Product

MBRF4035CTR thru MBRF40200CTR



40.0 Amperes Insulated Dual Common Anode Schottky Half Bridge Rectifiers

Features

- ★ Standard MBR matured technology with high reliability
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

Application

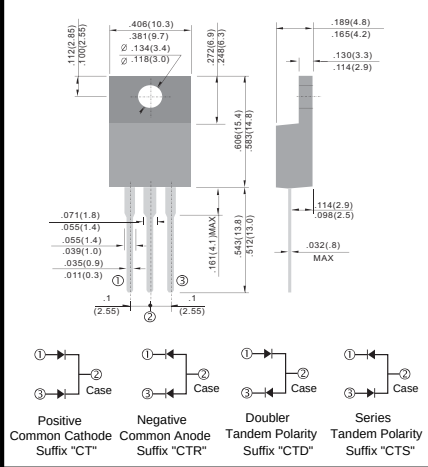
- ★ Automotive Inverters and Solar Inverters
- ★ Plating Power Supply, SMPS, EPS and UPS
- ★ Car Audio Amplifiers and Sound Device Systems

Mechanical Data

- ★ Case: Fully Isolated Molding TO-220F Full Plastic Pak
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-202 method 208
- ★ Polarity: As marked on diode body
- ★ Mounting position: Any
- ★ Weight: 2.1 gram approximately

ITO-220AB

Unit : inch (mm)

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)**

PARAMETER	SYMBOL	MBRF 4035 CTR	MBRF 4045 CTR	MBRF 4050 CTR	MBRF 4060 CTR	MBRF 4090 CTR	MBRF 40100 CTR	MBRF 40150 CTR	MBRF 40200 CTR	UNIT
Maximum repetitive peak reverse voltage	V _{RRM}	35	45	50	60	90	100	150	200	V
Maximum RMS voltage	V _{RMS}	24	31	35	42	63	70	105	140	V
Maximum DC blocking voltage	V _{DC}	35	45	50	60	90	100	150	200	V
Maximum average forward rectified current	I _{F(AV)}	40								A
Peak repetitive forward current (Rated V _R , Square wave, 20KHz)	I _{FRM}	40								A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	330								A
Peak repetitive reverse surge Current (Note 1)	I _{RRM}	2		1						A
Maximum instantaneous forward voltage (Note 2) I _F =20A, T _J =25℃ I _F =20A, T _J =125℃ I _F =40A, T _J =25℃ I _F =40A, T _J =125℃	V _F	0.75 0.65 0.80 0.75		0.77 0.67 - -		0.84 0.74 - -		0.90 0.80 1.01 -		V
Maximum reverse current @ rated VR T _J =25℃ T _J =125℃	I _R	1.0 30				0.5 20		0.1 10		mA
Voltage rate of change (Rated V _R)	dV/dt	10,000								V/μs
Typical thermal resistance	R _{BJC}	3.5								℃/W
Operating junction temperature range	T _J	- 55 to + 150								℃
Storage temperature range	T _{STG}	- 55 to + 150								℃

Note 1: 2.0μs Pulse Width, f=1.0KHz

Note 2: Pulse Test : 300μs Pulse Width, 1% Duty Cycle

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG. 1 FORWARD CURRENT DERATING CURVE

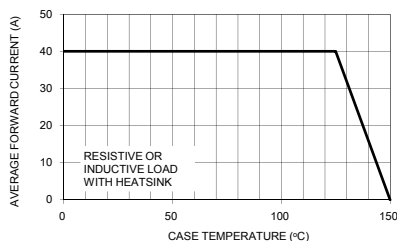


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

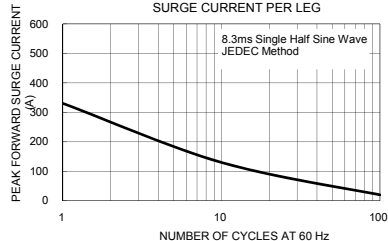


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

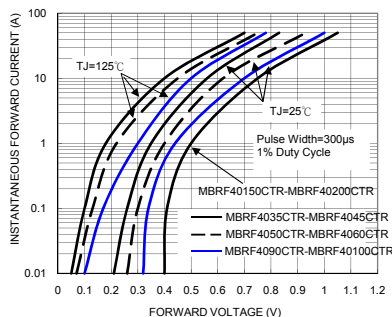


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

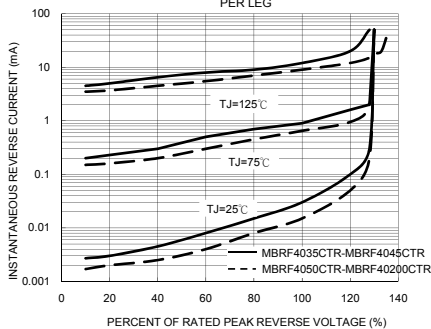


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

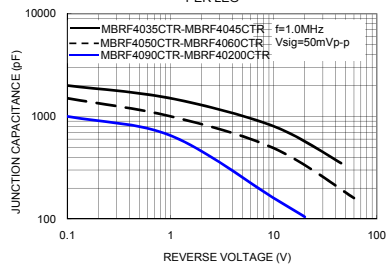


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

